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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/083,110

Filing Date: February 27, 2002

Appellant(s): JUD ET AL.

Virgil Marsh
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/12/05 appealing from the Office action mailed 6/18/04.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

U.S. Serial Number 09/505,713, appeal filed on February 17, 2000.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

First Grounds of Rejection

Claims 30, 34, and 38 stand rejected under 35 U.S.C. 102(b) as being anticipated by Migliorini et al (USPN 5,591,520) for the reasons recited in the prior office action mailed 12/17/03 and restated below.

Migliorini et al teach a high barrier metallized film with excellent bonds strengths comprising a coextruded multilayer film of a layer of polyamide (PA) adjacent and aggressively adhered to a layer of polypropylene (PP), and optionally a heat seal layer, such as ethylene propylene (EP) or ethylene propylene butene (EPB), applied on the polypropylene layer opposite the polyamide layer, and a metal layer such as aluminum applied to the polyamide surface wherein the metallized film may be subsequently extrusion laminated on the metal surface with a low density polyethylene film (LDPE) (*meets the limitation “first functional layer containing a first plastic film that is a polyolefin or extrusion layer of a polyolefin or one or more lacquer layers”*), such that the structure of the resulting film is: LDPE/metal/PA/PP/EP or EPB (Abstract; Col. 1, lines 10-64; Col. 2, lines 39-42; Col. 3, line 58-Col. 4, line 14; Example) wherein the Examiner takes the position that the polyamide/polypropylene film taught by Migliorini would inherently meet the instant limitation with regards to delamination during sterilization given that the film is formed by **coextrusion** as instantly claimed and wherein the aluminum layer taught by Migliorini et al reads upon the term “aluminum foil” considering the recited claims do not limit the term “foil” to any particular aluminum layer thickness.

Second Grounds of Rejection

Claims 30, 34, and 38-45 stand rejected under 35 U.S.C. 102(b) as being anticipated by Breitler et al (USPN 5,589,275) for the reasons recited in the prior office action mailed 12/17/03 and restated below.

Breitler et al teach a composite material suitable for sterilization containers or packages wherein the composite contains a metal layer on both sides of which is a plastic layer wherein the metal layer is a metal foil, preferably aluminum or aluminum alloy with an aluminum purity of most preferably 99.5% or higher, including AA8014, AA8079 or AA8101, having a thickness of 8-120 μm ; wherein the plastic layer(s) is a polyamide-based thermoplastic containing polyamide with a thickness of 20-50 μm (Abstract; Col. 1, lines 19-20; Col. 3, lines 1-22 and lines 66-67.) Breitler et al teach that the plastic layers on both sides of the metal layer may include composites of two or more films or layers wherein the polyamide-based thermoplastic layers may additionally and independent of each other be provided with an outer lying sealable layer and/or barrier layer of thermoplastics, such as a polypropylene sealable layer, wherein the sealable layers are sealable films deposited via adhesives, applied by lamination or lamination coating wherein the thickness of the sealable films may be 6-100 μm thick and furthermore, one or more layers, e.g. 1 to 10 μm thick, of a sealing layer coating may be deposited on the plastic composite (Col. 4, lines 1-38.) Breitler et al further teach that a single or double-sided sealable composite may be obtained by single or double-sided coextrusion of the plastic layers, wherein in that connection, it is useful for the plastic layers to contain or comprise a polyamide-based thermoplastic and at least one polyamide layer to feature a sealing layer on at least one side, i.e. **each layer of polyamide thermoplastic may be covered with a sealable layer, such as**

polypropylene, on one side or both sides, independent of the other layers (Col. 4, lines 36-45.) Breiter et al teach that to join the aluminum foil or to bond the plastic films or individual layers to each other, an adhesive coating and/or bonding primer are usually employed wherein a suitable adhesive is a maleic-anhydride modified polypropylene, and suitable bonding agents are epoxy or urethanes, wherein the bonding agent or primer may be for example applied in amounts of 0.1-10g/m², usefully 0.8-6g/m² or the adhesive layer has a thickness of 1-12μm or applied in an amount of 0.1-14 g/m² (Col. 5, lines 3-47.) Breitler et al further teach that the composite material may also feature a sealing layer such as PET on one or both sides of the composite independent of the other layers, with a thickness of 6-100μm (Col. 4, lines 20-35.) Breitler et al teach a number of layer arrangements wherein the plastic films may be formed by warm coating or coextrusion and may be subjected to stretch-drawing, to produce a composite film useful in manufacturing packaging and parts of packaging such as packaging containers, base parts, blister packs, for storing or packaging foodstuffs or pharmaceutical products (Col. 5, line 48-Col. 6, line 23; Col. 6, line 65-Col. 7, line 33.) With regards to the limitation “lacquer”, the Examiner takes the position that the synthetic coating layers taught by Breitler et al read on the term “lacquer” layer(s). Hence, according to a broad interpretation of Breitler et al, the composite may have the following structure: coextruded (PP/PA/PP)/optional primer or adhesive/metal foil/optional primer or adhesive/coextruded (PP/PA/PP) which reads on the above recited claims given that a polypropylene layer which is a polyolefin may be adjacent the metal foil directly or via a primer or adhesive and given that the instant claims do not exclude the incorporation of additional layers.

Third Grounds of Rejection

Claims 30, 34, and 38-45 stand rejected, alternatively, under 35 U.S.C. 103(a) as being unpatentable over Migliorini et al (USPN 5,591,520) in view of Breitler et al for the reasons recited in the prior office action mailed 12/17/03 and restated below.

The teachings of Migliorini et al are discussed above. Though Migliorini et al teach that the composite comprises a metal or aluminum layer formed by metallization, Migliorini et al does not teach that the metal layer is formed by a metal **foil** or aluminum **foil** having the instantly claimed properties of Claims 39-42. However, Migliorini et al do teach that a metallized layer is functional equivalent to a metal foil layer in terms of providing barrier properties in a multilayer composite film wherein the metal layer thickness affects the barrier properties of the film, hence based on the teachings of Migliorini et al, one having ordinary skill in the art at the time of the invention would have been motivated to utilize a metal or aluminum foil layer in the invention taught by Migliorini et al based on the desired barrier properties for a particular end use of the packaging film. Further, one having ordinary skill in the art would have been motivated to utilize any conventional metal foil or aluminum foil layer utilized in the art wherein Breitler et al teach the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and hence, one skilled in the art would have been motivated to utilize the preferred metal foil taught by Breitler et al in the composite film taught by Migliorini et al.

Fourth Grounds of Rejection

Claims 30-38 and 43-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al (USPN 4,407,689) for the reasons recited in the prior office action mailed 12/17/03 and restated below.

Ohtsuki et al teach a laminated member comprising a metal foil laminated to a thermoplastic film via a polyolefin-based adhesive wherein the metal foil is made of aluminum with a thickness of about 5 to 1,000um, may be subjected to chemical treatment (primer) on the surface of the metal foil, and may be backed with a heat-resistant film such as a polyamide or polyester film (*also reads on term "lacquer layer"*) since the metal foil is generally low in mechanical strength, wherein a print layer may be formed between the heat-resistant layer and the aluminum foil (Abstract; Col. 2, line 25-Col. 4.) Ohtsuki et al teach that the thermoplastic film may be a single resin film, for example, polyolefin such as polyethylene or polypropylene, polyamide, polyester, polyvinyl chloride, polyvinylidene chloride, polybutadiene, polycarbonate, an ethylene-vinyl acetate, or polyvinyl alcohol or a composite film produced therefrom by coextrusion (Col. 3, lines 20-32.) Ohtsuki et al further teach that the laminated product may be used for the production of a retort sterilization package wherein when it is used as a material for packaging food to be sterilized in a retort, it is preferred to use high density polyethylene or polypropylene as the polyolefin (Col. 5, lines 22-27.) Hence, Ohtsuki et al teach a composite having the following structure: polyester/print layer/primer/aluminum foil/primer/polyolefin adhesive/thermoplastic film wherein the teachings of Ohtsuki et al suggest that the thermoplastic film may be a coextruded film of two different polymers such as polypropylene and polyamide (Col. 3, lines 20-32; Col. 39-42) and therefore one skilled in the art at the time of the invention would have been motivated to utilize a coextruded film of any two polymers disclosed by Ohtsuki et al including polypropylene and polyamide. With regards to Claim 32, though Ohtsuki et al teach that the polyester backing film is present to provide improved mechanical strength, Ohtsuki et al does not specifically teach that the polyester film is monoaxially or biaxially

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oriented or that the polyester is formed from PET or PPT. However, it is well known and conventional in the art to orient a polymer film mono- or bi-axially to improve the mechanical strength of the film hence given that Ohtsuki et al teach that the polyester film is provided because the metal foil lacks mechanical strength, one having ordinary skill in the art at the time of the invention would have been motivated to improve the mechanical strength of the polyester film and resulting resin backed metal foil by orienting the polyester film as well known and conventional in the art. Further, one having ordinary skill in the art at the time of the invention would have been motivated to utilize any polyester film conventionally utilized in producing packaging composite materials wherein PET and PPT are obvious species of polyester film utilized in the art to provide mechanical strength to a composite film.

Fifth Grounds of Rejection

Claims 39-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al in view of Breitler et al for the reasons recited in the prior office action mailed 12/17/03 and restated below.

The teachings of Ohtsuki et al are discussed above. Though Ohtsuki teach that the metal foil may be an aluminum foil, Ohtsuki et al does not specifically teach that the aluminum foil has the properties as instantly claimed. However, one having ordinary skill in the art would have been motivated to utilize any conventional aluminum foil utilized in the art wherein Breitler et al teach the use of an aluminum foil layer having the instantly claimed properties in a composite barrier packaging film and hence, one skilled in the art would have been motivated to utilize the preferred aluminum foil taught by Breitler et al in the composite barrier film taught by Ohtsuki et al.

Sixth Grounds of Rejection

Claim 48 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al in view of Abrams for the reasons recited in the prior office action mailed 12/17/03 and restated below.

The teachings of Ohtuski et al are discussed above. Though Ohtsuki et al teach that the aluminum foil layer may comprise a print layer and a polyester or polyamide overcoat or backing film, Ohtsuki et al does not teach that the print layer is provided on the polyester backing film and then an overcoat layer is provided on the print layer. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any combination of print and polyester layers wherein Abrams teaches that a sterilizable packaging composite can comprise a print layer to provide desired product information for a particular packaging end use and that a protective overcoat or lacquer layer can be provided over the print layer to protect the print layer during sterilization. Therefore, one having ordinary skill in the art at the time of the invention would have been motivated to include a print layer on either side of the polyester film taught by Ohtsuki et al to provide desired product information or decorative properties, wherein the print layer is further provided with a protective overcoat layer to protect the print layer during sterilization as taught by Abrams.

(10) Response to Argument**First Grounds of Rejection**

With respect to Migliorini et al, the Appellants argue that Migliorini allegedly does not teach the plastic of the second functional layer (c) that consists of a coextrudate of polyamide and polypropylene. However, the Examiner notes that the Appellants appear to refer to the

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Migliorini references in a piecemeal fashion as opposed to a reference as a whole. As discussed in detail above, Migliorini et al clearly teach a coextruded film comprising the instant layers wherein the composite specifically exemplified by Migliorini et al includes an additional EPB layer that Migliorini et al clearly teaches is an optional seal layer. Hence, though Migliorini et al do not specifically provide an example having the instantly claimed structure without the EPB layer, the instant invention having a “second functional layer” consisting of a coextrudate of just polyamide and polypropylene would have been clearly envisaged by the teachings of Migliorini et al considering Migliorini et al clearly teaches that the EPB layer is an optional layer and/or considering that Migliorini et al clearly teaches that the composite includes a polyamide layer aggressively adhered to a polypropylene layer and the composite may be formed by coextrusion.

Second Grounds of Rejection

With respect to Breitler et al, the Appellants continue to argue that Breitler et al allegedly does not disclose any member of Appellants’ first functional layer and that the Examiner has allegedly improperly interpreted the teachings of Breitler et al. The Appellants argue that one skilled in the art would not have reasonably interpreted the specified sections in the same manner as the Examiner, that nowhere does Breitler et al disclose a polypropylene layer between a metal layer and a polyamide layer, and that the recitation at Col. 4 of Breitler et al only teaches polypropylene layers on the outer sides of the composite and not the outer sides of the polyamide layer including between the polyamide layer and the metal layer. However, as previously stated, the Examiner maintains her position with regards to Breitler et al and specifically points to lines 36 to 44 of Column 4 of Breitler which read:

"A single or double-sided sealable composite is obtained by single or **double sided coextrusion of the plastic layers with e.g. a polypropylene/polyethylene copolymer.**

In that connection it is useful for the plastic layers to contain or comprise of a polyamide-based thermoplastic to feature a sealing layer on at least one side i.e. each layer of polyamide-based thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers." (Emphasis added.)

The Examiner contends that this recitation clearly states that **each layer** of polyamide may be provided on **one or both sides** with a sealable layer, or polypropylene per Col. 4, line 24, independent of the other layers, **not** that each layer of polyamide may be provided **only on one side** with a sealable layer such that the composite is provided with an outerlying sealable layer on one or both sides as interpreted by the Appellants. Hence, Column 4, lines 36-44 states that each polyamide layer can be covered with a sealable layer on one or both sides, independent of the other layers, wherein one or both sides obviously refers to the polyamide layer not the composite as argued by the Appellants. If one considers the Appellants' interpretation that the polypropylene is only on one side of the polyamide layer, namely the outer lying surface of the polyamide layer, why would the reference state that the plastic layers are subjected to double-sided coextrusion wherein double-sided coextrusion would provide a polypropylene layer on both sides of the polyamide layer? Further, why would the reference state that at least one polyamide layer be provided on at least one side with a sealing layer, further indicating that the polyamide layer can be provided on both sides with a polypropylene layer? Lastly, if the Appellants' interpretation that the polypropylene sealable layer is only provided on the outer lying surfaces of the polyamide layers, wouldn't the statement "each layer of polyamide-based

thermoplastic may be covered with a sealable layer on one or both sides, independent of the other layers" have read "may be covered with a sealable layer on the outer lying side, independent of the other layers" not "on one or both sides"? Therefore, the Examiner maintains that contrary to the Appellants' arguments, a fair reading of Breitler et al by one having ordinary skill in the art would nevertheless lead one skilled in the art to the interpretation that a sealable or polypropylene layer can be provided on **either or both sides of each polyamide layer** independent of other layers and hence Breitler et al when taken as a whole does in fact teach polypropylene layers between the polyamide plastic layers and the metal foil as in the instant invention.

Third Grounds of Rejection

In terms of the obviousness rejection over Migliorini in view of Breitler et al, the Appellants first argue that Migliorini et al and Breitler et al do not teach the functional layers of the instant composite as argued in the First and Second Grounds of Rejections as recited above however the Examiner maintains her position for the reasons as stated above with regards to these functional layers. The Appellants further argue that the Examiner's attempt to show motivation fails because Migliorini allegedly teaches away from the instant invention by showing improvements in using a metallized layer in place of a metal foil, however, though Migliorini teaches improvements based on particular desired characteristics of the final film, Migliorini clearly provides a suggestion that a metallized layer and a metal foil are both utilized for the same purpose in packaging films, namely barrier properties, and hence the Examiner maintains that one skilled in the art at the time of the invention would have been motivated to utilize a metallized layer or a metal foil layer given the reasonable expectation of success,

considering both are known to provide barrier properties and hence are functional equivalents in the art.

Fourth, Fifth and Sixth Grounds of Rejection

With respect to the rejections over Ohtsuki et al, the Appellants argue that Ohtsuki et al do not recognize the problem that the instant invention solves, do not teach that the coextruded layers have a bond sufficient to preventing delamination during sterilization, and provides a generic teaching of various components of the instant invention such that a broad number of possible arrangements are suggested with no direction to select Appellants' combination. However, the Examiner notes that Ohtsuki et al clearly teach that the resulting composite may be subjected to sterilization and utilized in producing sterilized packaging film, hence, though Ohtsuki et al do not explicitly recite that the two coextruded layer do not delaminate, given that Ohtsuki et al clearly teach subjecting the film to sterilization resulting in a **composite** that is **suitable for sterilized packaging**, the Examiner takes the position that Ohtsuki et al do in fact suggest that the coextruded layers can be subjected to sterilization and hence do not delaminate. Further, the Examiner takes the position that though Ohtsuki et al provides a generic teaching of the invention and lists various materials that can be utilized, the list of materials is small enough that one skilled in the art would be directed to Appellants' invention given the suggestion of Ohtsuki et al to utilize the materials of the instantly claimed invention and given the reasonable expectation of success.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Monique R. Jackson
Primary Examiner
Technology Center 1700
October 31, 2005

Monique R. Jackson
MONIQUE R. JACKSON
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